

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT

TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 1

The California Department of Transportation (Caltrans) is currently considering the development of regulations regarding new technologies and new technical specifications to replace the current automated vehicle identification protocol currently set out in the California Code of Regulations (commonly referred to as the "Title-21 protocol"). Caltrans is very interested in hearing from stakeholders as to their views on the transitioning from Title-21 protocol to a new protocol, most likely the 6C protocol.

Caltrans will be holding two public workshops (July 8, 2015 in Oakland and July 22, 2015 in Fontana) to solicit initial comments on the transition from the current Title-21 protocol.

However, in anticipation and in connection with those workshops and other activities to facilitate public participation in the regulatory process, Caltrans invites you to complete the following questionnaire. This information will greatly assist Caltrans as it begins the process of considering new regulations.

Please provide your responses following each question. Please feel free to forward this questionnaire to any other interested parties.

Please e-mail your responses to: Title.21.Changes@dot.ca.gov.

Please list the name of the person completing the questionnaire and the name of the agency or company you represent.

NAME David Kristick; dkristick@e-470.com; (303) 537-3702

AGENCY E-470 Public Highway Authority

1. Are there any alternatives to the transition to 6C, including comparable Federal regulations or regulations/protocols in other states? [E-470 Public Highway Authority and the State of Colorado transitioned to the ISO 18000 6C protocol from the T21 protocol beginning in 2010 with internal testing on E-470, the Northwest Parkway Public Highway Authority and CDOT's I-25 Express Managed Lanes.](#)

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT

TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 2

2. What are the benefits of the transition to 6C? What are the drawbacks? **Colorado strongly supports California's planned adoption of the 6C protocol. There were many benefits experienced by the state of Colorado and our toll paying customers. The transition allowed our facilities to undergo an upgrade of our RFID readers and antennae, which improved our RFID operational performance; the adoption of the 6C protocol reduced our transponder cost from \$14.15/unit to the \$0.76/unit cost we enjoy in 2015, the various form factors (windshield, headlight/motorcycle and switchable HOV) have allowed us to better accommodate our various customer segments and to better serve unique vehicle windshield designs.**

3. Please discuss the factors involved, including projected timetables, for transitioning to a new protocol, with respect to the following:

a. Transponder procurements/existing inventories **Due to E-470's procurement rules and the 6C transponder manufacturing process, the identification of transponder vendors, adjustment of existing inventories and rollout required nine (9) months.**

b. Toll-system modifications **E-470 was able to retrofit seventy-six (76) toll lanes, four (4) CDOT managed lanes and assist the Northwest Parkway in four months with organic staff. The 3M 5204 multiprotocol readers provided the flexibility to continue to use the T21 protocol without interruption.**

c. Agency administrative changes **Changes were insignificant. E-470 (all of Colorado) provides our customers transponders free of charge. Minimal back office changes were required apart from TagID sequence management.**

d. Public education, outreach, and marketing **Minimal – we allowed for a three month campaign. As we elected to not conduct a customer-wide replacement (replace as old tags ran out of battery or as customers desired), we began the conversion with new customer accounts primarily.**

e. Issues regarding certification **The 6C Toll Operators Coalition (6CTOC) (WSDOT, SRTA, UDOT and E-470), initiated the certification program with OmniAir Certification Services and Federal Signal Technologies/3M, with the intent of requiring that any 6C device or equipment must be certified before 6C TOC members would procure that equipment. The certification process was conducted in parallel with the development of the 6C Tag Programming Standard.**

f. Issues regarding three-position transponders. **Not experienced in Colorado.**

4. Please describe how the transition:

a. Impacts business and/or employees **Transitioning to the 6C protocol reduced our tag procurement costs and our fulfillment and postage costs.**

b. Impacts small businesses **Negligible**

c. Impacts jobs or occupations **Due to our growth in facilities (CDOT's managed lanes network), traffic and ExpressToll accounts, our FTE headcount has grown to accommodate that growth.**

d. Imposes reporting requirements **None**

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT

TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 3

e. Impacts individuals. **None**

5. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? **If Caltrans were to become a 6C user, tag costs will likely decrease nationally and California's adoption would assist other western states considering the adoption of the 6C protocol and to strengthen western states toll interoperability. Additionally, California's adoption would also assist other states to consider less expensive user-funded transportation options via the 6C protocol. California's becoming a 6C protocol state will improve national interoperability and should increase competitiveness in pricing for tolling and other ITS technologies using RFID components nationwide.**

6. What are the costs that businesses and individuals may incur to comply with this regulation over its lifetime? **Adoption of the 6C protocol will bring a lower cost of operations in regard to transponder costs.**

7. What are the fiscal impacts on state and local government? **See above.**

8. Are there any issues regarding fairness of competition? **As the 6C protocol is open and not constrained by proprietary licenses at present, present fairness and open competition is maintained or improved.**

9. Are there any issues regarding individual privacy? **Not in Colorado's circumstances; only the TagID is used to process the toll transaction. Not any customer information is processed or communicated in the toll lane communications process.**

10. Please provide comments on any other relevant issues not addressed above. **To remarks offered regarding litigation or licensing issues relating to the 6C protocol:**

- A. **Not any of the Colorado toll authorities, the Colorado Department of Transportation or the US36 and NWP Concessionaires are or have been engaged in any litigation relating to 6C use for tolling in Colorado.**
- B. **The Denver International Airport and other private off-airport parking businesses are using EXpressToll 6C transponders for parking fee collection; all doing so without litigation.**
- C. **Again, Colorado strongly supports California's future adoption of ISO 18000 6C technology.**

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE